

In the Claims:

Please cancel claims 1, 2, 12-14, 21, 24, 31, 33 and 36 without prejudice.

1-2. (Canceled)

3. (Currently Amended) The ~~dimensionally stable polymer~~ inflatable medical balloon of claim [[1]] 37, wherein said micro-composite material comprises about 0.1 wt-% to about 20 wt-% of said fibril component.

4. (Currently Amended) The ~~dimensionally stable polymer~~ inflatable medical balloon of claim [[1]] 37, wherein said micro-composite material comprises about 0.5 wt-% to about 8 wt-% of said fibril component.

5. (Currently Amended) The ~~dimensionally stable polymer~~ inflatable medical balloon of claim [[1]] 37, wherein said micro-composite material comprises about 0.5 wt-% to about 15 wt-% of said fibril component.

6. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein said micro-composite material comprises about 50 wt-% to about 99.9 wt-% of said polymer matrix component.

7. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein said micro-composite material comprises about 85 wt-% to about 99.5 wt-% of said polymer matrix component.

8. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the micro-composite material further comprises a compatibilizer component.

9. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim 8 wherein said compatibilizer is a block copolymer.

10. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of Claim 8 wherein said compatibilizer is selected from the group consisting of copolyester elastomers, ethylene unsaturated ester copolymers, copolymers of ethylene and a carboxylic acid or derivative thereof, polyolefins or ethylene-unsaturated ester copolymers grafted with functional monomers, copolymers of ethylene and a carboxylic acid or derivative thereof, terpolymers of ethylene, copolymers of unsaturated esters and carboxylic acids or derivatives thereof, maleic acid grafted styrene/ethylene-butadiene-styrene block copolymers, acrylic elastomers, glycidyl(meth)acrylates, ionomeric copolymers, polyester-polyether block copolymers, and

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mixtures thereof.

11. (Currently Amended) The ~~dimensionally stable polymer~~ inflatable medical balloon of claim [[1]] 8, wherein said compatibilizer is selected from the group consisting of ethylene-maleic anhydride copolymers, ethylene-methyl acrylate copolymers, ethylene-methyl acrylate-maleic anhydride terpolymers, ethylene-methyl acrylate-methacrylic acid terpolymers, alkyl(meth)acrylate-ethylene-glycidyl(meth)acrylate terpolymers, and mixtures thereof.

12-14. (Canceled)

15. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the fibril component has a melting point of about 275° C or less.

16. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the fibril component has a melting point of about 250° C or less.

17. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the fibril component has a melting point of about 150° to about 249° C.

18. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the fibril component has a melting point of about 230° C or less.

19. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the matrix component comprises a semi-compliant thermoplastic polymer.

20. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the matrix component has a melting point of about 140° C to about 265° C.

21. (Canceled)

22. (Currently Amended) The ~~dimensionally stable polymer~~ inflatable medical balloon of claim [[1]] 37, wherein the matrix component has a melting point of about 150° C to about 230° C.

23. (Currently Amended) The ~~dimensionally stable polymer~~ inflatable medical balloon of claim [[1]] 37, wherein the matrix component has a melting point of about 220° or less.

24-25. (Canceled)

26. (Currently Amended) The ~~dimensionally stable~~ inflatable medical balloon of claim [[1]] 37, wherein the orientation of the micro-fibers relative to the longitudinal axis of the balloon changes through the balloon material in a direction transverse to said longitudinal axis.

27-36. (Canceled)

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37. (New) An inflatable medical balloon which is mounted on a catheter, and has a determined preinflation length, restricted longitudinal and radial characteristics, a circumference and a longitudinal axis, composed of a micro-composite material comprising a polymer matrix component with a polymer fibril component distributed in the polymer matrix component, the polymer fibril component having micro-fibers oriented substantially parallel or diagonally to the longitudinal axis of the balloon, the polymer fibril component composed of one or more members selected from the group consisting of rigid-rod thermoplastic, semi-rigid rod thermoplastic, liquid crystal polymer, which are stronger than the matrix material and have bulk elongation between 50% and 150%, which is less than the matrix material and the fibril component and the matrix component operatively adhere to one another.